

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Examiner: Kang, Insun

Application No.: 09/870,223

Art Unit: 2193 / Conf. # 8092

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Docket No. **RSW920010033US1**

For: **METHOD AND APPARATUS FOR TAILORING VOICE PROMPTS OF AN
INTERACTIVE VOICE RESPONSE SYSTEM**

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BRIEF OF APPELLANT

This Appeal Brief, pursuant to the Notice of Appeal filed March 25, 2009, in light of the Notification of Non-Compliant Appeal Brief mailed September 24, 2009, is an appeal from the rejection of the Examiner in the Final Office Action dated November 12, 2008.

REAL PARTY IN INTEREST

International Business Machines, Inc. is the real party in interest.

RELATED APPEALS AND INTERFERENCES

An appeal identified as Appeal 2007-0338 for Application 09/870,223 was decided on February 21, 2007.

STATUS OF CLAIMS

Claims 9, 14, 15, 17-20 and 22-25 are rejected. Claims 1-8, 10-13, 16 and 21 are cancelled. This Brief is in support of an appeal from the rejection of claims 9, 14, 15, 17-20 and 22-25.

STATUS OF AMENDMENTS

All amendments have been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

CLAIM 9- INDEPENDENT

The present invention provides a method for selecting a voice prompt of an interactive voice response system that operates according to the compiled code of an application program (110 in FIG. 1) that provides call flow instructions for the interactive voice response system. See specification, page 3, lines 2-4; method depicted in FIG. 2.

Commands are received from a telephone caller. Responsive to said received commands, it is determined that the voice prompt is needed, and responsive to said determining that voice prompt is needed, providing a variable identified with a function of the voice prompt (step 220 of FIG. 2). A first value is assigned to the variable by accessing an assignment table that is held outside the compiled code of the application program (step 230 of FIG. 2). A first database record that includes a digitally encoded voice prompt is identified and selected through use of the first value (step 240 of FIG. 2). See specification, page 6, line 20 - page 7, line 5.

The digitally encoded voice prompt consists of a first bit pattern that is specified by the first value and consists of a first sequence of bits, wherein the bits of the first sequence of bits are stored contiguously in the identified first database record. See Specification, page 7, lines 15-18; page 8, lines 10-12 (a greeting as a bit pattern in the database 130 of FIG. 1).

A first process that generates a first complete message from the identified first database record and speaks the generated first complete message to the telephone caller is performed as consisting of the steps of: reading the identified first database record (step 250 of FIG. 2);

passing the first bit pattern from the first database record that had been read to an audio apparatus (140 of FIG. 1); performing, by the audio apparatus, a digital-to-analog conversion of the first bit pattern that had been passed to the audio apparatus (step 260 of FIG. 2); and speaking, by the audio apparatus, the first complete message to the telephone caller, said first complete message consisting of the digital-to-analog converted first bit pattern. See specification, page 7, lines 3-8.

CLAIM 14 - DEPENDENT

The present invention provides the method of claim 9, wherein the voice prompt pertaining to the first bit pattern in the first database record consists of music, and wherein said speaking the first complete message comprises speaking the first complete message consisting of the digital-to-analog converted first bit pattern as said music. See specification, page 7, lines 9-13.

CLAIM 17 - DEPENDENT

The present invention provides the method of claim 9, wherein the voice prompt pertaining to the first bit pattern in the first database record consists of a sequence of beeps, and wherein said speaking the first complete message comprises speaking the first complete message consisting of the digital-to-analog converted first bit pattern as said sequence of beeps. See specification, page 7, lines 9-13.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 9 and 18-20 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Osder et al. (US Patent 5,493,606) hereinafter referred to as “Osder.”
2. Claims 14, 15, 17 and 22-25 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Osder et al. (US Patent 5,493,606) hereinafter referred to as “Osder.”

ARGUMENT

GROUND OF REJECTION 1

Claims 9 and 18-20 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Osder et al. (US Patent 5,493,606) hereinafter referred to as “Osder.”

Claim 9

Appellant respectfully contends that Osder does not anticipate claim 9, because Osder does not teach each and every feature of claim 9 as evidence in the following two examples.

As a first example of why Osder does not anticipate claim 9, Osder does not teach the feature: “receiving commands from a telephone caller; responsive to said received commands, determining that the voice prompt is needed” (emphasis).

Appellant asserts that Osder does not teach that a command is received from a telephone caller, which results in determining that the voice prompt is needed.

Appellant asserts that the only appearance of “caller” in Osder is in Osder, col. 28, lines 1-7 which recites: “The SYSTEM Indexed Prompt Table contains prompt names for the prompts required by PEP 13 for handling certain error conditions, providing a standard greeting for a Network Application, providing the voice, beep or tone that notifies a caller to begin recording a message and providing a prompt that plays one second of silence after another prompt is played.”. Appellant asserts that the preceding quote from Osder does not teach receiving commands from the caller, but rather notifies the caller to begin recording a message.

Appellant notes that Osder sometimes uses the word “user” to represent a telephone caller. Such references to “user” as a telephone caller in Osder are as follows.

Osder, col. 9, lines 54-58 recites: “a user effects a telephone connection with SPIN 12 via telephone 45 with respect to the user's session of terminal 42 and SPIN 12 prompts the user through the prompt management procedure.” Appellant asserts that the preceding quote from Osder does not teach receiving commands from the user.

Osder, col. 17, lines 13-14 recites: “ The SPIN User ID is entered to uniquely identify a user in establishing a telephone connection to SPIN.” Appellant asserts that the preceding quote from Osder does not teach receiving commands from the user.

Osder, col. 18, lines 5-12 recites: “As described with respect to FIG. 8, the SPIN User ID is displayed on the bottom of the screen and the OFFLINE/ONLINE field displays whether or not the telephone 45 is connected to the SPIN terminal session. SPIN 12 communicates with Expand Prompts 60, via the path 78, to play prompts to the user through the telephone 45 for controlling the recording or playing of voice.” Appellant asserts that the preceding quote from Osder does not teach receiving commands from the user.

The Examiner argues that Osder, col. 8, lines 1-7 teaches the preceding feature of claim 9.

In response, Appellant respectfully contends that Osder, col. 8, lines 1-7 teaches receiving “voice messages from a telephone connection”, but does not teach that the voice messages received from the telephone connection are commands from a telephone caller. For example, a voice message from a telephone caller may be “hello” which is not a command, “am I properly connected?” which is not a command, etc. To the contrary, Osder, col. 7, lines 67 teaches that commands are received from software, namely through Application Interface Module (AIM) 30.

Further to the contrary, Osder, col. 12, lines 1-6 recites: "With continued reference to FIG. 4, a Network Application 10 uses PEP commands to request the playing of prompts and to supply any dynamic data required by a prompt. A PEP command from a Network Application 10 is intercepted by the agent 16 and passed to PEP 13 along a path 61 for expansion." The preceding quote from Osder discloses that the agent 16 receives PEP commands from the Network Application 10, rather than from the user, for playing prompts.

Furthermore, Osder, col. 28, lines 1-7 recites: "The SYSTEM Indexed Prompt Table contains prompt names for the prompts required by PEP 13 for ... providing the voice, beep or tone that notifies a caller to begin recording a message". In other words, Osder teaches the software directing a command to the telephone caller ("notifies a caller to begin recording a message") and not vice versa.

In "Response to Arguments", the Examiner argues: "Osder also discloses a voice interactive system where prompts are played based on communication between a caller and the system through commands. When a caller requests to play a voice message or to access the system, a prompt such as "you have five new messages" or a personal greeting/user name is played (i.e. col. 5 lines 54-56; col. 12 lines 59-61). Without a caller command that is received by an interactive voice response system that plays a voice prompt as in the instant invention and Osder, such a system would not work as an IVR system. To play the prompts in Osder, whether they are for greetings, voice messages, a caller command is needed to select the appropriate prompts in Osder's database."

In response to the preceding argument by the Examiner in "Response to Arguments", Appellant asserts that Osder does not teach use of an IVR system. Rather, Osder teaches "a prompt management system for playing prompts" (Osder, claim 1).

Furthermore, the Examiner's statement in "Response to Arguments" that "To play the prompts in Osder, whether they are for greetings, voice messages, a caller command is needed to select the appropriate prompts in Osder's database" is an argument by the Examiner that Osder inherently teaches "receiving commands from a telephone caller", which is incorrect. Osder, col. 5, lines 51-52 teaches that the Network Application invokes playing of the prompt. Appellant respectfully contends, however, that it is not inherent for the Network Application to receive a command from the user in order to select the prompt to be played. For example, the Network Application could be programmed to automatically play the prompt reciting the number of new messages the user has every time the user initiates a telephone connection with Osder's SPIN software, without any command being received from the user. As another example, the Network Application could be programmed to automatically play a greeting reciting the user's name every time the user initiates a telephone connection with Osder's SPIN software, without any command being received from the user. The Examiner is unable to provide any citations in Osder with accompanying analysis that allegedly demonstrates that Osder explicitly or inherently teaches that a command is received from a telephone caller, resulting in determining that the voice prompt is needed.

The Examiner further argues that "Osder discloses ... responsive to said received commands, determining that the voice prompt is needed (i.e. "When a Network Application 10 requires that a prompt to be played," col. 7 lines 41-42)".

In response, Appellant notes that the preceding quote of Osder by the Examiner is incomplete and hence misleading. The complete quote from Osder, col. 7, lines 41-43 is: "When a Network Application 10 requires that a prompt be played, the Network Application issues a PEP command to the agent 16."

In other words, claim 9 requires that the voice prompt is responsive to the commands received from the telephone caller. In contrast, Osder teaches that the PEP command is responsive to a determination by the Network Application 10 that a voice prompt is needed.

In “Response to Arguments”, the Examiner argues: “The examiner investigated the whole instant specification and it recites, "when a voice prompt is needed, the application program provides a metalanguage variable that identifies the function of the voice prompt" in pages 6-7. In Osder, when a "Network Application 10 requires that a prompt to be played (i.e. col. 7 lines 41-42)," in response to a caller command to start the voice interactive system or check the voice message etc, the SPIN application table that assigns the values of the Ids to point to the prompt element sets such as the tables 2-5 containing the pre-recorded prompts in SPINDB as seen in Fig 3 is accessed. As has been pointed out in the examiner's answer mailed on 5/16/2006, the SPIN Id values (UV 10AE, UV 10SP etc in table 1) are the entry points to the pre-recorded prompt elements (Osder, col. 28 lines 30-40) "for selectively playing the prompts either in American English, Spanish ...etc (col. 8 lines 32-36)" when the voice prompts are needed to be played.”

In response to the preceding argument by the Examiner in “Response to Arguments”, Appellant asserts that the Examiner’s statement that Appellant’s specification recites "when a voice prompt is needed, the application program provides a metalanguage variable that identifies the function of the voice prompt” is irrelevant to the preceding feature of claim 9. The preceding feature of claim 9 recites “responsive to said received commands, determining that the voice prompt is needed”, which is not addressed in the preceding argument by the Examiner in “Response to Arguments”.

In summary, Appellant has presented and analyzed every referral to “caller” and every referral to “user” in which the user represents a telephone caller, and Appellant has demonstrated that in every such referral to “caller” and “user”, Osder does not teach that a command is received from a telephone caller which results in determining that the voice prompt is needed.

In addition, Appellant has demonstrated that every citation to Osder by the Examiner with respect to the preceding feature of claim 9 does not teach that a command is received from a telephone caller which results in determining that the voice prompt is needed.

Therefore, Osder does not anticipate claim 9.

As a second example of why Osder does not anticipate claim 9, Osder does not teach the feature:

“identifying a first database record that includes a digitally encoded voice prompt consisting of a first bit pattern that consists of a first sequence of bits, wherein the bits of the first sequence of bits are stored contiguously in the identified first database record, and wherein said identifying the first database record is implemented through use of the first value which selects the first database record and specifies the first bit pattern;

performing a first process that generates a first complete message from the identified first database record and speaks the generated first complete message to the telephone caller, said performing the first process consisting of the steps of:

reading the identified first database record;

passing the first bit pattern from the first database record that had been read to an audio apparatus;

performing, by the audio apparatus, a digital-to-analog conversion of the first bit pattern that had been passed to the audio apparatus;

speaking, by the audio apparatus, the first complete message to the telephone caller, said first complete message consisting of the digital-to-analog converted first bit pattern.”

The preceding claimed first process *consists of* four steps (reading, passing, performing, speaking) having linkage requirements with respect to performance order and data coupling, due to the recited linking language, as explained *infra*.

The linking language of “the first database record that had been read” in the “passing” step generates the linking requirements of: (1) the “passing” step must be performed after the “reading” step; and (2) the same first bit pattern that is read from the first database record in the “reading” step is passed to the audio apparatus in the “passing” step. The Examiner has not demonstrated that Osder satisfies the preceding linking requirements that link the “reading” and “passing” steps. For the reading step, the Examiner cites Osder, col. 28, lines 30-37; col. 3, lines 48-60; col. 12, lines 59-61; col. 10, lines 6-10, which does not even disclose the “reading” step of reading the identified first database record. For the “passing” step, the Examiner cites Osder, col. 3, lines 48-61; col. 4, lines 5-25; col. 6, lines 11-31, which discloses “a NAP Send Voice Message command to play the prompt over the telephone” in Osder, col. 4, lines 18-19. However, the bit pattern of the prompt that must be passed to an audio apparatus in the “passing” step after performance the “reading” step is not a bit pattern appearing in any of the Examiner’s citations for the “reading” step. As explained *supra*, the Examiner’s citations do not even teach the “reading” step.

The linking language of “the first bit pattern that had been passed to the audio apparatus” in the “performing” step generates the linking requirements of: (1) the “performing” step must be performed after the “passing” step; and (2) the bit pattern that is converted in the digital-to-analog conversion of the “performing” step must be the same bit pattern that had been previously passed to the audio apparatus in the “passing” step. The Examiner has not demonstrated that Osder satisfies the preceding linking requirements that link the “passing” and “performing”

steps. For the “passing” step, the Examiner cites Osder, col. 3, lines 48-61; col. 4, lines 5-25; col. 6, lines 11-31, which discloses “a NAP Send Voice Message command to play the prompt over the telephone” in Osder, col. 4, lines 18-19. For the “performing” step, the Examiner cites Osder, col. 5, lines 42-56, which does not even teach performing the recited digital-to-analog conversion. Therefore, the bit pattern that is required to be converted by a digital-to-analog conversion in the “performing” step after the “passing” step is performed is not the bit pattern that was passed to the audio device in the “passing” step. As explained *supra*, the Examiner’s citation does not even teach the “performing” step.,

The linking language of “consisting of the digital-to-analog converted first bit pattern” in the “speaking” step generates the linking requirements of: (1) the “speaking” step must be performed after the “performing” step; and (2) the bit pattern of the message that is spoken in the “speaking” step has been previously converted in the digital-to-analog conversion of the “performing” step. The Examiner has not demonstrated that Osder satisfies the preceding linking requirements that link the “performing” and “speaking” steps. For the “performing” step, the Examiner cites Osder, col. 5, lines 42-56, which does not even teach performing the recited digital-to-analog conversion. For the “speaking” step, the Examiner cites Osder, col. 5, lines 42-56, which recites: “If there were five new messages in the mailbox at run time, the prompt would play "you have five new messages"” in Osder, col. 5, lines 54-56. However, the bit pattern of the message that is spoken in the “speaking” step in Osder, col. 5, lines 54-56 has not been converted in a prior digital-to-analog conversion in the Examiner’s citation for the “performing” step. As explained *supra*, the Examiner’s citation does not even teach the “performing” step.

In summary, the Examiner's citations for the four steps (reading, passing, performing, speaking) in the recited first process do not satisfy the aforementioned linkage requirements with respect to performance order and data coupling. Thus, Osder does not anticipate claim 9.

In addition, the "consisting of" language in the claimed first process limits the steps of the first process to the four recited steps of reading, passing, performing, and speaking. Appellant asserts that the Examiner has not demonstrated that Osder does not teach any other step than the recited four steps for the first process. In fact, it is nearly impossible to determine the totality of steps for the first process in Osder, because Osder does not provide an organized teaching, such as in a flow chart, of the method steps for implementing Osder's invention. It is only with great difficulty in probing the Osder patent disclosure that enables method steps in Osder to be identified. Appellant notes that the Examiner has not even attempted to demonstrate that Osder's first process is limited to the four steps (reading, passing, performing, speaking) recited for the first process in claim 9.

Next, Appellant demonstrates that Osder's first process includes an "assembling" step that is not within the scope of the four steps (reading, passing, performing, speaking) recited for claim 9.

As indicated on page 4, line 22 - page 5, line 3 in the decision of the Board of Appeals and Interferences on February 21, 2007 (Appeal 2007-0338 for Application 09/870,223), Osder's voice prompt that is spoken at runtime is assembled by inserting dynamic data (e.g., from Table 5 of Osder) into a template (e.g., from Table 3 of Osder) having static elements and missing portions, wherein the dynamic elements are inserted into the missing portions of the template to generate the final assembled voice prompt. See also, Osder, col. 1, lines 48-57

which recites: "A prompt is composed of and defined by a sequence of static and dynamic elements. A static element denotes a fixed phrase, whereas a dynamic element provides a location in the prompt for variable data to be provided by the Network Application at run time. For example, in the prompt "you have <number> new messages", the phrases "you have" and "new messages" are static elements whereas <number> is a dynamic element to be provided by the Network Application in accordance with the conditions at run time."

Osder does not teach omission of the preceding "assembling step" of assembling the runtime voice prompt by inserting the dynamic data into the template having the static elements and the missing data. Therefore, by being required to perform said "assembling step" which is not a step in the claimed first process of claim 9, Osder does not teach performing the claimed first process *consisting of* the four recited steps (reading, passing, performing, speaking). Accordingly, Osder does not anticipate claim 9.

In other words, Osder's voice prompt that is spoken at runtime is generated by the "assembling step" from distinct bit patterns located in different database records, namely first bit patterns consisting of static elements located in one portion of a database and a second bit pattern consisting of a dynamic element located in another portion of the database. The Examiner has acknowledged that the static and dynamic elements are stored in separate tables, namely Tables 3 and 5, respectively, and therefore do not collectively constitute a bit pattern that is stored in the first database record.

In "Response to Arguments", the Examiner further argues: "is noted that Osder states that every static and dynamic element of a SPIN application is recorded in the cache element table 80 (col. 10, lines 6-9; see, fig 5A) to play the whole prompt such as "you have five new messages"."

In response to the preceding argument by the Examiner in “Response to Arguments”, Appellant notes that in table 80 of FIG. 5A, each static element and each dynamic element is stored in a different record, as is evident in FIG. 5A. Therefore, table 80 in Osder does not comprise a first database record that stores the whole prompt of "you have five new messages" which makes it impossible to perform the “reading” step of “reading the identified first database record” for the whole prompt.

Appellant asserts that individual static and dynamic elements are read from distinct single records in Osder. After the static and dynamic elements are read from different database records in Osder, an “assembly” step must be performed in Osder to create that whole prompt. In fact, even if the whole prompt were to consist of only static elements, the “assembly” step would still have to be performed in Osder to assemble the static elements into the whole prompt.

Therefore, by requiring an “assembly” step, Osder does not teach the first process of claim that *consists of* the four recited steps (reading, passing, performing, speaking).

Based on the preceding arguments, Appellant respectfully maintains that Osder does not anticipate claim 9, and that claim 9 is in condition for allowance.

Claim 18

Since claim 18 depends from claim 9 which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 18 is likewise not anticipated by Osder under 35 U.S.C. §102(b).

Claim 19

Since claim 19 depends from claim 9 which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 19 is likewise not anticipated by Osder under 35 U.S.C. §102(b).

Claim 20

Since claim 20 depends from claim 9 which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 20 is likewise not anticipated by Osder under 35 U.S.C. §102(b).

GROUND OF REJECTION 2

Claims 14, 15, 17 and 22-25 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Osder et al. (US Patent 5,493,606) hereinafter referred to as “Osder.”

In addition with respect to claims 14-15, the decision of the Board of Appeals and Interferences (page 7, line 24 - page 8, line 7) on February 21, 2007 (Appeal 2007-0338 for Application 09/870,223) recites: “We will sustain the Examiner's rejection of claims 3-8 and 11-16. At the outset, we note that specifying the various attributes of voice prompts in these claims merely describes the content of the data stored in the voice prompt database. Because this data content does not further limit the claimed invention either functionally or structurally, it essentially constitutes non-functional descriptive material. Such non-functional descriptive material, however, does not patentably distinguish over prior art that otherwise renders the claims unpatentable. *See In re Ngai*, 367 F.3d 1336, 1339, 70 USPQ2d 1862, 1864 (Fed. Cir. 2004).”

In light of the preceding analysis by the Board of Appeals and Interferences (Appeal 2007-0338 for Application 09/870,223), Appellant has restructured the language of claims 14-15 in a manner that the recited attributes of the voice prompts do not merely describe the content of the data stored in the voice prompt database, but actually recite the active method steps of speaking the first message. The language of claim 17 has been similarly restructured, as is the language of claims 22-25. Thus, the language of claims 14-15, 17, and 22-25 comprises functional material in the form of active method steps.

Appellant's analysis *infra* with respect to claims 14-15, 17, and 22-25 will make use of the following rules of law: A rejection of a claim on grounds of obviousness requires that all features of the claim are **known** in the prior art.

An attempt to show that it is obvious to combine elements to disclose the claimed invention starts with elements that are known in the prior art and then seeks to demonstrate that it is obvious to combine the elements. *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) ("When it first established the requirement of demonstrating a teaching, suggestion, or motivation to combine **known elements** in order to show that the combination is obvious, the Court of Customs and Patent Appeals captured a helpful insight. See *Application of Bergel*, 292 F. 2d 955, 956-957 (1961)") (emphasis added).

Insight as to why all elements of a claim must be known to reject the claim on grounds of obviousness is provided in *In re Shetty*, 566 F.2d 81, 86, 195 USPQ 753, 756-57 (C.C.P.A. 1977) (reversing the Board's rejection of a claim based on alleged inherency under 35 U.S.C. 103 of a method to curb appetite, and stating: "[t]he inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. **Obviousness cannot be predicated on what is unknown**")." (emphasis added)

In other words, demonstrating obviousness for modifying a relied-upon reference by subject matter not disclosed in the relied-upon reference comprises a first step and a second step. The first step is to provide legally acceptable evidence that the subject matter not disclosed in the relied-upon reference is known in the prior art. The second step is to provide analysis demonstrating that it is obvious to modify the relied-upon reference by incorporating into the relied-upon reference the subject matter that is known in the prior art but is not disclosed in the relied-upon reference.

Appellant will present arguments *infra* that the Examiner has repeatedly and consistently attempted to demonstrate obviousness by modifying the relied-upon reference of Osder by skipping the first step and arguing only the second step, which is legally impermissible under *KSR Int'l Co. v. Teleflex Inc.* More specifically, Appellant will present arguments *infra* demonstrating that the Examiner's arguments with respect to various claims of claims 14-15, 17, and 22-25 has repeatedly rejected claims on grounds of obviousness without demonstrating that all elements of the claim are known in the prior art.

Appellant reiterates the following explanation for the preceding rule in *KSR Int'l Co. v. Teleflex Inc.* which limits the obviousness of modifying a relied-upon reference to incorporation of only *known* subject matter", namely the explanation that "Obviousness cannot be predicated on what is unknown" as recited in *In re Shetty*.

Claim 14

Since claim 14 depend from claim 9, which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 14 is not unpatentable over Osder under 35 U.S.C. §103(a).

In addition with respect to claim 14, Appellant respectfully contends that Osder does not disclose the feature: "wherein the voice prompt pertaining to the first bit pattern in the first database record consists of music, and wherein said speaking the first message comprises speaking the first message consisting of the digital-to-analog converted first bit pattern as said music".

The Examiner argues that “Per claim 14: ... Osder does not explicitly teach pertaining to the first bit pattern in the first database record consists of music wherein said speaking the first complete message comprises speaking the first complete message consisting of the digital-to-analog converted first bit pattern as said music. However, it would have been obvious for one having ordinary skill in the art of computer software development and configuration to include music voice prompts as callers may have different preferences and purposes. The modification would be obvious because one having ordinary skill in the art would be motivated to provide callers various voice prompt options for different preferences.”

In response, Appellant notes that the Examiner has not cited any prior art reference that discloses the preceding feature of claim 14. As discussed *supra*, a claim cannot be rejected on a ground of obviousness if an element of the claim is unknown in the prior art. *In re Shetty*, 566 F.2d 81, 86, 195 USPQ 753, 756-57 (C.C.P.A. 1977) (“Obviousness cannot be predicated on what is unknown”). Appellant asserts that it is not obvious to modify Osder by incorporating into Osder a claimed feature that is **unknown** in the prior art.

The Examiner has not cited any prior art allegedly disclosing that it is known in the prior art to have a voice prompt consisting of music. Moreover, the Examiner has not cited any prior art allegedly disclosing that a preference for a voice prompt consisting of music is known in the prior art. Thus, the Examiner is arguing that it is obvious to modify Osder by including the **unknown** feature of using a voice prompt consisting of music, which is not legally permitted under *KSR Int’l Co. v. Teleflex Inc.* As *In re Shetty* states “Obviousness cannot be predicated on what is unknown”. Therefore, Appellant respectfully contends that the Examiner has not established a *prima facie* case of obviousness in relation to claim 14.

Accordingly, claim 14 is not unpatentable under 35 U.S.C. §103(a) over Osder.

Claim 15

Since claim 15 depend from claim 9, which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 15 is not unpatentable over Osder under 35 U.S.C. §103(a).

Claim 17

Since claim 17 depend from claim 9, which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintain that claim 17 is not unpatentable over Osder under 35 U.S.C. §103(a).

In addition with respect to claim 14, Appellant respectfully contends that Osder does not disclose the feature: “wherein the voice prompt pertaining to the first bit pattern in the first database record consists of a sequence of beeps, and wherein said speaking the first message comprises speaking the first message consisting of the digital-to-analog converted first bit pattern as said sequence of beeps”.

The Examiner argues that “Per claim 17: ... Osder does not explicitly teach pertaining to the first bit pattern in the first database record consists of a sequence of beeps wherein said speaking the first complete message comprises speaking the first complete message consisting of the digital-to-analog converted first bit pattern as said a sequence of beeps. However, it would have been obvious for one having ordinary skill in the art of computer software development and configuration to include various voice prompts such as including beeps as callers may have different preferences and purposes. The modification would be obvious because one having

ordinary skill in the art would be motivated to provide callers various voice prompt options for different preferences.”

In response, Appellant notes that the Examiner has not cited any prior art reference that discloses the preceding feature of claim 17. As discussed *supra*, a claim cannot be rejected on a ground of obviousness if an element of the claim is unknown in the prior art. *In re Shetty*, 566 F.2d 81, 86, 195 USPQ 753, 756-57 (C.C.P.A. 1977) (“Obviousness cannot be predicated on what is unknown”). Appellant asserts that it is not obvious to modify Osder by incorporating into Osder a claimed feature that is **unknown** in the prior art.

The Examiner has not cited any prior art allegedly disclosing that it is known in the prior art to have a voice prompt consisting of a sequence of beeps. Moreover, the Examiner has not cited any prior art allegedly disclosing that a preference for a voice prompt consisting of a sequence of beeps is known in the prior art. Thus, the Examiner is arguing that it is obvious to modify Osder by including the **unknown** feature of using a voice prompt consisting of a sequence of beeps, which is not legally permitted under *KSR Int'l Co. v. Teleflex Inc.* As *In re Shetty* states “Obviousness cannot be predicated on what is unknown”. Therefore, Appellant respectfully contends that the Examiner has not established a *prima facie* case of obviousness in relation to claim 17.

Accordingly, claim 17 is not unpatentable under 35 U.S.C. §103(a) over Osder.

Claim 22

Since claim 22 depend from claim 9, which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 22 is not unpatentable over Osder under 35 U.S.C. §103(a).

Claim 23

Since claim 23 depend from claim 9, which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 23 is not unpatentable over Osder under 35 U.S.C. §103(a).

Claim 24

Since claim 24 depend from claim 9, which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 24 is not unpatentable over Osder under 35 U.S.C. §103(a).

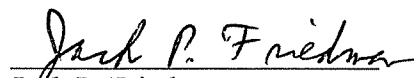
Claim 25

Since claim 25 depend from claim 9, which Appellant has argued *supra* to not be anticipated by Osder under 35 U.S.C. §102(b), Appellant maintains that claim 25 is not unpatentable over Osder under 35 U.S.C. §103(a).

SUMMARY

In summary, Appellants respectfully requests reversal of the November 12, 2008 Office Action rejection of claims 9, 14, 15, 17-20 and 22-25.

Date: 09/30/2009


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Doreen Lynn Galli

Examiner: Kang, Insun

Application No.: 09/870,223

Art Unit: 2193 / Conf. # 8092

Filing Date: 05/30/2001

Docket No. **RSW920010033US1**

For: **METHOD AND APPARATUS FOR TAILORING VOICE PROMPTS OF AN
INTERACTIVE VOICE RESPONSE SYSTEM**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPENDIX A - CLAIMS ON APPEAL

9. A method for selecting a voice prompt of an interactive voice response system that operates according to the compiled code of an application program that provides call flow instructions for the interactive voice response system, the method comprising the steps of:

- receiving commands from a telephone caller;
- responsive to said received commands, determining that the voice prompt is needed;
- responsive to said determining that voice prompt is needed, providing a variable identified with a function of the voice prompt;
- assigning a first value to the variable by accessing an assignment table that is held outside the compiled code of the application program;
- identifying a first database record that includes a digitally encoded voice prompt consisting of a first bit pattern that consists of a first sequence of bits, wherein the bits of the first sequence of bits are stored contiguously in the identified first database record, and wherein said identifying the first database record is implemented through use of the first value which selects the first database record and specifies the first bit pattern;

performing a first process that generates a first complete message from the identified first database record and speaks the generated first complete message to the telephone caller, said performing the first process consisting of the steps of:

- reading the identified first database record;
- passing the first bit pattern from the first database record that had been read to an audio apparatus;
- performing, by the audio apparatus, a digital-to-analog conversion of the first bit pattern that had been passed to the audio apparatus; and
- speaking, by the audio apparatus, the first complete message to the telephone caller, said first complete message consisting of the digital-to-analog converted first bit pattern.

14. The method of claim 9, wherein the voice prompt pertaining to the first bit pattern in the first database record consists of music, and wherein said speaking the first complete message comprises speaking the first complete message consisting of the digital-to-analog converted first bit pattern as said music.

15. The method of claim 9, wherein the voice prompt pertaining to the first bit pattern in the first database record consists of an audio tone, and wherein said speaking the first complete message comprises speaking the first complete message consisting of the digital-to-analog converted first bit pattern as said audio tone.

17. The method of claim 9, wherein the voice prompt pertaining to the first bit pattern in the first database record consists of a sequence of beeps, and wherein said speaking the first complete message comprises speaking the first complete message consisting of the digital-to-analog converted first bit pattern as said sequence of beeps.

18. The method of claim 9, wherein the method further comprises:

- assigning a second value to the variable by accessing the assignment table, wherein the second value of the variable differs from the first value of the variable;

replacing the first value of the variable in the assignment table with the assigned second value of the variable;

identifying a second database record that includes a digitally encoded voice prompt consisting of a second bit pattern that consists of a second sequence of bits wherein the bits of the second sequence of bits are stored contiguously in the identified second database record, and wherein the second bit pattern differs from the first bit pattern, and wherein said identifying the second database record is implemented through use of the second value which selects the second database record and specifies the second bit pattern;

performing a second process that generates a second complete message from the identified second database record and speaks the generated second complete message to the telephone caller, said performing the second process consisting of the steps of:

reading the second database record;

passing the second bit pattern from the second database record that had been read to the audio apparatus;

performing, by the audio apparatus, a digital-to-analog conversion of the second bit pattern that had been passed to the audio apparatus; and

speaking, by the audio apparatus, a second complete message to the telephone caller, said second complete message consisting of the digital-to-analog converted second bit pattern.

19. The method of claim 18, wherein said assigning the second value and said replacing the first value with the second value are performed by an interactive voice response (IVR) system administrator.

20. The method of claim 19, wherein said replacing the first value with the second value by the IVR system administrator does not comprises using special IVR programming skill to replace the first value with the second value.

22. The method of claim 18,

wherein the voice prompt pertaining to the first bit pattern in the first database record is spoken by a first speaker;

wherein the voice prompt pertaining to the second bit pattern in the second database record is spoken by a second speaker;

wherein said speaking the first complete message comprises speaking by the first speaker the first complete message consisting of the digital-to-analog converted first bit pattern; and

wherein said speaking the second complete message comprises speaking by the second speaker the second complete message consisting of the digital-to-analog converted second bit pattern.

23. The method of claim 18,

wherein the voice prompt pertaining to the first bit pattern in the first database record is spoken by a male speaker;

wherein the voice prompt pertaining to the second bit pattern in the second database record is spoken by a female speaker;

wherein said speaking the first complete message comprises speaking by the male speaker the first complete message consisting of the digital-to-analog converted first bit pattern; and

wherein said speaking the second complete message comprises speaking by the female speaker the second complete message consisting of the digital-to-analog converted second bit pattern.

24. The method of claim 18,

wherein the voice prompt pertaining to the first bit pattern in the first database record has a first level of formality;

wherein the voice prompt pertaining to the second bit pattern in the second database record has a second level of formality that differs from the first level of formality;

wherein said speaking the first complete message comprises speaking the first complete message consisting of the digital-to-analog converted first bit pattern having the first level of formality; and

wherein said speaking the second complete message comprises speaking the second complete message consisting of the digital-to-analog converted second bit pattern having the second level of formality.

25. The method of claim 18,

wherein the voice prompt pertaining to the first bit pattern in the first database record is spoken by a speaker in a first wording and conveys a meaning;

wherein the voice prompt pertaining to the second bit pattern in the second database record is spoken by the speaker in a second wording that differs from the first wording and conveys said meaning;

wherein said speaking the first complete message comprises speaking by the speaker the first complete message consisting of the digital-to-analog converted first bit pattern in the first wording that conveys said meaning; and

wherein said speaking the second complete message comprises speaking by the speaker the second complete message consisting of the digital-to-analog converted second bit pattern in the second wording that conveys said meaning.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Doreen Lynn Galli

Examiner: Kang, Insun

Application No.: 09/870,223

Art Unit: 2193 / Conf. # 8092

Filing Date: 05/30/2001

Docket No. **RSW920010033US1**

For: **METHOD AND APPARATUS FOR TAILORING VOICE PROMPTS OF AN
INTERACTIVE VOICE RESPONSE SYSTEM**

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P.O. Box 1450
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APPENDIX B - EVIDENCE

There is no evidence entered by the Examiner and relied upon by Appellants in this appeal.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Doreen Lynn Galli

Examiner: Kang, Insun

Application No.: 09/870,223

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APPENDIX C - RELATED PROCEEDINGS

DECISION ON APPEAL

Appeal 2007-0338

Application 09/870,223

Decided February 21, 2007

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

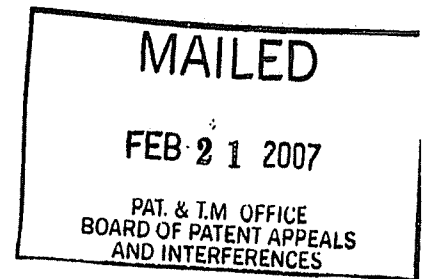
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DOREEN LYNN GALLI

Appeal 2007-0338
Application 09/870,223
Technology Center 2100

Decided: February 21, 2007



Before JAMES D. THOMAS, MAHSHID D. SAADAT, and ALLEN R. MACDONALD, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1-16, the only claims pending in this application. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

INTRODUCTION

The claims are directed to an interactive voice response system. Specifically, the system includes a database of pre-recorded voice prompts which are held outside the compiled code of an application program. To retrieve a voice prompt from the database, the program provides a variable whose value specifies the entry point into the database. The variable's value is assigned by an assignment table. Claim 1 is illustrative:

1. An interactive voice response system, comprising:
 - an application program that provides call flow instructions, wherein a call flow instruction that invokes a voice prompt provides a variable that can be read from outside compiled code of the application program;
 - a programmable processor that executes the call flow instructions of the application program;
 - a database that contains a plurality of pre-recorded voice prompts; and
 - an assignment table that assigns a value to the variable to provide an entry point to the database.

The Examiner relies on the following prior art reference to show unpatentability:

Osder

US 5,493,606

Feb. 20, 1996

The rejections as presented by the Examiner are as follows:

1. Claims 1, 2, 9, and 10 are rejected under 35 U.S.C. § 102(b) as being anticipated by Osder.
2. Claims 3-8 and 11-16 are rejected under 35 U.S.C § 103(a) as unpatentable over Osder.

Rather than repeat the arguments of Appellant or the Examiner, we make reference to the Briefs and the Answer for their respective details.

Only those arguments actually made by Appellant have been considered in this decision. Arguments which Appellant could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2004).

OPINION

It is our view, after consideration of the record before us, that the disclosure of Osder fully meets the invention as set forth in claims 1, 2, 9, and 10. We also conclude that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 3-8 and 11-16. Accordingly, we affirm.

We first consider the Examiner's rejection of claims 1, 2, 9, and 10 under 35 U.S.C. § 102(b) as being anticipated by Osder. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984); *W.L. Gore and Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983).

The Examiner has indicated how the claimed invention is deemed to be fully met by the disclosure of Osder (Answer 13-15). Regarding independent claim 1, Appellant argues, among other things, that Osder does not teach a database containing plural pre-recorded voice prompts as

claimed. Rather, Osder is said to generate prompts as needed at runtime by (1) expanding dynamic elements <DYN3> and <DYN5>, and (2) concatenating the computed dynamic elements with static elements. Simply put, Appellant contends that Osder's prompts do not exist until runtime (i.e., when the actual values for the dynamic elements are computed). Therefore, Osder's prompts do not exist in a database as claimed (Br. 7; Reply Br. 4-6, 8-10). The Examiner responds that Osder's static and dynamic elements are pre-recorded prompt elements in tables stored in the SPIN¹ database (Answer 5-6).

Appellant also argues that Osder does not teach an assignment table that assigns a value to the variable to provide an entry point to the database as claimed (Br. 7). The Examiner argues that Osder's SPIN Application Table assigns the values of the identifiers (e.g., UV10AE, etc.) that point to prompt element sets shown in Tables 2-5 that contain the pre-recorded prompts (Answer 6). Appellant responds that even if the SPIN Application Table corresponds to the claimed assignment table as the Examiner contends, Osder does not disclose a "variable" to which the values UV10AE, etc. are assigned and which can be read from outside the compiled code of the application program as claimed (Reply Br. 11).

We will sustain the Examiner's rejection of independent claim 1. In our view, Osder's stored static elements alone fully meet a "voice prompt" giving the term its broadest reasonable interpretation. It is undisputed that the static and dynamic elements in Osder are pre-recorded and stored in a database. *See* Reply Br. 5, ll. 17-19 (noting that the static and dynamic

¹ SPIN is an acronym for "Speech Interface to Network Application Platform." *See* Osder, abstract.

elements are stored in the database, not the prompt itself). We recognize that Osder ultimately assembles a voice prompt at runtime by stringing together static and dynamic elements as Appellants indicate. *See, e.g.,* Osder, Fig. 1. But such pre-recorded *elements of a prompt* are themselves “voice prompts” giving the term its broadest reasonable interpretation.

For example, the static element E1000B is a pre-recorded voice saying the phrase “NEW MESSAGES” (Osder, col. 1, ll. 44-48; Fig. 1). This static element itself conveys content to the listener. In any event, the broad scope of the term “voice prompt” simply does not preclude Osder’s stored, pre-recorded static elements, notwithstanding their later combination with dynamic elements to assemble a longer voice prompt at runtime.

We also agree with the Examiner that the SPIN Application Table reasonably meets the claimed “assignment table” limitation giving the term its broadest reasonable interpretation. As the Examiner indicates, Osder’s SPIN Application Table assigns the values of the identifiers (e.g., UV10AE, etc.) that point to prompt element sets shown in Tables 2-5 that contain the pre-recorded prompts. As shown in Fig. 3, each identifier in the SPIN Application Table (UV10AE, etc.) corresponds to a unique SPIN application and provides an entry point to the database. *See* Osder, Fig. 3 (showing arrows pointing to Tables 2, 4, and 5). Giving the term “variable” its broadest reasonable interpretation, we conclude that placing each SPIN application identifier in the assignment table itself inherently involves the table assigning a value to a variable. Moreover, the assignment table also assigns a value to the variable associated with selecting the appropriate prompt from the American English Prompt Set 2 (i.e., P1000, P1001, etc.).

Such a variable, in our view, also provides an entry point to the database. Moreover, these variables are capable of being read from outside the compiled code of the application program as claimed.

For at least these reasons, we will sustain the Examiner's rejection of independent claim 1. Since Appellant has not separately argued the patentability of dependent claim 2 with particularity, it falls with independent claim 1. *See In re Nielson*, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987). *See also* 37 C.F.R. § 41.37(c)(1)(vii).

Regarding independent claim 9, Appellant argues that Osder does not disclose reading a database record that includes a digitally encoded voice prompt, wherein the database record is identified by the value assigned to the variable (Br. 8-9; Reply Br. 8). The Examiner responds that Osder's SPIN Application Table assigns the value of the SPIN Application ID variable which is used to identify the appropriate prompt record (Answer 8).

We will sustain the Examiner's rejection of claim 9. As we indicated previously, Osder's assignment table assigns a value to the variable associated with selecting the appropriate prompt from the American English Prompt Set 2 (i.e., P1000, P1001, etc.). In our view, the appropriate prompt from this set fully meets a "database record" giving the term its broadest reasonable interpretation.

For at least these reasons, we will sustain the Examiner's rejection of independent claim 9. Since Appellant has not separately argued the patentability of dependent claim 10 with particularity, it falls with independent claim 9.

We next consider the Examiner's rejection of claims 3-8 and 11-16 under 35 U.S.C § 103(a) as unpatentable over Osder. In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Hedges*, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

The Examiner's rejection essentially finds that Osder teaches every claimed feature except for the respective attributes of the voice prompts recited in claims 3-8 and 11-16 (i.e., different speakers, different levels of formality, music, audio tone, same meaning but different wording). The Examiner, however, states that since callers may have different preferences and purposes, providing the voice prompts in Osder with the various claimed attributes would have been obvious to the skilled artisan (Answer 16). Appellant argues that the Examiner's rationale for modifying Osder is merely speculative in failing to show where the prior art suggests such a modification (Br. 11-19; Reply Br. 14-17).

We will sustain the Examiner's rejection of claims 3-8 and 11-16. At the outset, we note that specifying the various attributes of voice prompts in

these claims merely describes the content of the data stored in the voice prompt database. Because this data content does not further limit the claimed invention either functionally or structurally, it essentially constitutes non-functional descriptive material. Such non-functional descriptive material, however, does not patentably distinguish over prior art that otherwise renders the claims unpatentable. *See In re Ngai*, 367 F.3d 1336, 1339, 70 USPQ2d 1862, 1864 (Fed. Cir. 2004).

Nevertheless, Osder expressly states that voice prompts could be spoken by a man or a woman (Osder, col. 28, ll. 56-58). This teaching strongly suggests that the voice prompts can be tailored to suit particular needs and preferences. Furthermore, Appellant's specification states that it is known in the art for programmers to tailor the vocal, dialect, or linguistic characteristics of voice prompts in interactive voice response systems (Specification 2:3-11). These teachings, in our view, amply support the Examiner's position that it would have been obvious to the skilled artisan to tailor Osder's voice prompts in the manner recited in claims 3-8 and 11-16 for users with different preferences and purposes. The Examiner's rejection of claims 3-8 and 11-16 is therefore sustained.

DECISION

We have sustained the Examiner's rejections with respect to all claims on appeal. Therefore, the decision of the Examiner rejecting claims 1-16 is affirmed.

Appeal 2007-0338
Application 09/870,223

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2004).

AFFIRMED

PGC

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